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ACCESSION NO. 76074-259

DEPARTMENT OF THE AIR FORCE/USAF SCIENTIFIC ADVISORY BOARD (SAB) 12/5/94

FYI

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)

18 OCT 1994

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FYI

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY (AETC)

18 OCT 1994

Jay W. Kelley, Lieutenant General, USAF
Commander, Air University
55 LeMay Plaza South
Maxwell AFB AL 36112-6335
base: 953 1110
(205)-953-2044 (Gen. off)

Dr. Edward Teller
Hoover Institution Stanford University
Herbert Hoover Memorial Bldg, Room 208
Stanford CA 94305

Dear Dr. Teller

When you lectured to the students and faculty participating in the SPACECAST 2020 study, you expressed an interest in knowing "how it turns out." Since we do not intend to publish a report, we've prepared the enclosed limited distribution executive summary describing the major findings. The information and insights you gave us were critical to coming to closure on the potential of space systems to serve national and international security in the middle of the next century.

Our report was delivered to General Merrill A. McPeak, the Chief of Staff of the United States Air Force, on 22 June 1994. He expressed satisfaction with the process we used, the creativity it sparked, and he directed his staff to "wring every drop out of the report." Thus, we really can't say how it will turn out for months and years to come. One thing is certain, however: you performed an invaluable service by focusing the 114 student participants on space and the far future. We're deeply appreciative of your generous help and hope that we can continue our affiliation with you. The role of Air University is to prepare military leaders for the future. That task cannot be accomplished without the help of thinkers, innovators, scholars, and analysts from many disciplines. Please don't be surprised if we ask for your help again.

You may want additional information on the findings or have questions relating to the project. Please feel free to call me or Colonel Dick Szafranski at (205) 953-2722. If there are further significant developments as a result of the study, I'll let you know what they are. Until then, thank you very much for your help.

Sincerely

JAY W. KELLEY
Lieutenant General, USAF
Commander

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Executive Summary

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

29 NOV 1994

MEMORANDUM FOR USAF SCIENTIFIC ADVISORY BOARD MEMBERS AND SENIOR SCIENTISTS

FROM: Gene H. McCall, Chairman

SUBJECT: New World Vistas

Dr. Widnall has directed the SAB to study technology opportunities for the future Air Force, forecasting a New World Vista of key science and technology opportunities. Typical SAB studies are directed toward a particular subject, and organized simply. However, New World Vistas should survey all applicable technologies perhaps using Toward New Horizons as a model for organizing. I am asking each of you to suggest topics and organization for the effort, with an initial response by Friday, 9 December

The Secretary emphasized three themes: First, to identify the fields of explosive change in technology, and assess their impact on the Air Force; second, to identify the contribution of these changes to affordability of weapons systems and operations; and third, to identify areas and mechanisms for commercial cooperation.

Please address one or more of the above topics. Each of you should identify the ways that your field can improve Air Force capabilities and operations over the next two decades. Why would the Air Force want to support work in areas that you suggest? I recommend that you focus on three stages of development: First, Identify sciences or technologies at, or near, the technology demonstration stage; second, identify what areas are at the well developed, perhaps university, research stage; and third, identify the emerging sciences in your field.

In each category, you may wish to comment on whether the field is one of "explosive technology change." You may, of course, note fields which seem to have been forgotten but which offer great possibilities. After addressing these issues for your field of expertise, if you still have the energy, please recommend other fruitful areas. Finally, if you know people who can contribute to the study, please identify them and note the most efficient way we could use them.

I would appreciate a reply as soon as possible. I suggest Friday, 9 December as a target date. Your input can be sent to the SAB Secretariat: tim.courington@afsb.hq.af.mil or FAX (703) 693-6262 or to my e-mail address: ghm@lanl.gov (best way to reach me) or FAX: (505) 665-4080; Phone: (505) 667-1983.

GENE H MCCALL
Chairman

LABORATORIES/INSTITUTES/NATIONAL ACADEMIES/NOT FOR PROFIT

Carnegie Mellon Software Engineering Institute	Lawrence E. Druffel
David Sarnoff Research Center	Curtis R. Carlson
Environmental Research Institute of Michigan	Jack L. Walker
Georgia Tech Research Institute	Gerald J. Carey
Institute for Evaluating Health Risks	Renate D. Kimbrough
Jet Propulsion Laboratory	Barbara A. Wilson
Lawrence Livermore National Laboratory	Milton Finger
Lawrence Livermore National Laboratory	Alexander J. Glass
Lawrence Livermore National Laboratory	Edward Teller *
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